

## Patent Claims

1. A process for producing colored streams of fluid for a hot water fitting, in which hot and cold water is supplied in pipelines (8; 9) separated from one another and the supply of the quantity ratios of hot and cold water is controlled such that a certain temperature is produced,

5 characterized by the following steps:

a. manual opening of the valves for the hot and cold water,  
b. flowing of the hot and cold water into a mixing chamber (7) of the fitting,  
c. actuating of a pressure switch (10) when the pressure rises in said mixing chamber (7) due to the water flowing in,

10 d. switching on of a control block (13) by means of said pressure switch (10),  
e. sensing of the temperature of the water mixed in said mixing chamber (7) and reporting the thus determined signals to said control block (13),

f. recognizing the determined signals as a certain temperature,  
g. classifying the temperature to one or a plurality of defined temperature ranges,

15 h. assigning a temperature range to a certain luminous color,

I. activating diodes (17) of the luminous colors red, blue or yellow in question, which are arranged in the area of an outflow opening (5) of the fitting,

j. manual adjustment in the case of the temperature-dependent luminous color deviating from the desired temperature,

20 k. manual closing of the valves for the hot and cold water when water is no longer needed,

l. switching off of said control block (13) by means of said pressure switch (10) because of the decreased water pressure in said mixing chamber (7).

2. A process for producing colored streams of fluid for a hot water fitting in accordance with claim 1, characterized in that according to information from a pressure sensor (12), the fluid is

sent to a temperature sensor (16), at which a different, temperature-dependent, electric signal is produced in each case, which is transmitted into said control block (13) for comparing the water temperature determined with the staggered set value ranges and for activating said light-emitting diodes (17R, 17B, 17G) in question of a certain color radiation.

- 5       3. A process for producing colored streams of fluid for a hot water fitting in accordance with claim 1, characterized in that the primary colors red, yellow and blue are provided for mixing the water in a temperature-dependent, colored appearance, and these primary colors are mixed additively for producing a light in any desired color.
- 10      4. A process for producing colored streams of fluid for a hot water fitting in accordance with claim 1, characterized in that, as an alternative, the temperature-dependent luminous colors produced of the stream of fluid can be switched over to a temperature-independent production of a color play by means of a constant changing of the luminous colors.
- 15      5. A device for the application of the process in accordance with the claims 1 through 4, from which either a cold, hot or mixed cold and hot water water jet can be taken, a temperature sensor (16) and differently colored light-emitting diodes (17) are arranged for measuring the temperature of the water located in the hot water fitting, and said temperature sensor (16) and said light-emitting diodes are functionally connected to circuitry supplied with weak current, can be activated by means of said temperature-dependent, differently colored light-emitting diodes (17) and said means are provided in the flow channel, with which the flow of water is detectable, and
- 20      the device for producing a colored stream of fluids can be switched on, characterized in that said colored, differently illuminating color diodes (17) and/or RGB-LED are installed on a printed circuit board (18) and this said printed circuit board (17) [sic, (18) - Tr.Ed.] is placed with said light-emitting diodes (17) and/or RGB-LED in said perlator (6) or placed directly in the perlator

(6), the hot water fitting is equipped with a pressure switch (10), which is functionally connected to a pressure sensor (12) arranged in said mixing chamber (7) in the interior for detecting the flow of water; furthermore, a control block (13), to which is supplied weak current by a transformer (14), is provided as circuitry, from said control block (13) leads a pipeline (15) to said 5 temperature sensor (16), which is arranged already at the start of the channel in said mixing chamber (7), said control block (13) is functionally connected both to said pressure switch (10) and to said printed circuit board (18) equipped with said light-emitting diodes (17) and/or RGB-LED, said printed circuit board (18) with said light-emitting diodes (17) and/or RGB-LED has sufficient free space for the water flow, and thus, the water is sent to said light-emitting diodes 10 (17) and/or RGB-LED, whereby the colored light rays disperse in said water jet (20), and thus, a visible color effect is achieved in the reflection on the edge of said water jet (20) or impacting on an obstacle.

15 6. A device in accordance with claim 5, characterized in that the colors of said light-emitting diodes (17) are arranged and switched in the necessary number and the selected colors on said printed circuit board (18), such that a colored jet image, whose action is intended, is produced in the stream of fluid.

20 7. A device in accordance with claim 5, characterized in that for mixing the water in a temperature-dependent, colored appearance, a red-illuminating diode (17R) is provided for the primary color red, a yellow-illuminating diode (17G) is provided for yellow, and a blue-illuminating diode (17B) is provided for blue, and said control block (13) activates these said light-emitting diodes (17R, 17Ge [sic, 17Gr? - Tr.Ed.] and 17B), such that these primary colors are additively mixed for producing a light in any desired color.